

COUNTY OF ORANGE HEALTH CARE AGENCY

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PUBLIC HEALTH EPIDEMIOLOGY & ASSESSMENT

SARS Guidance for the Outpatient Setting

At present, the primary mode of transmission of the Severe Acute Respiratory Syndrome (SARS)-coronavirus appears to be through droplet spread; however, airborne and contact spread may also play a role. The following are suggested actions based on infection control principles and recommendations from the Centers for Disease Control and Prevention (CDC) and the California Department of Health Services. Please see www.cdc.gov for more information. Much of what is suggested here would be applicable to other communicable diseases with the potential for airborne and contact transmission.

Preparation

- Determine in advance which examination room in the office provides the most separation from patients and staff and would be used for evaluating a possible SARS case.
- Be sure you have on hand any necessary personal protective equipment (PPE), such as gowns, gloves, masks, N-95 respirators ¹, eye protection and disposable equipment, if possible, for the necessary tasks. These items should be immediately available to staff.
- Provide information on SARS and transmission of SARS to staff. Keep your information about SARS, including the case definition, updated by checking the CDC SARS web site regularly (http://www.cdc.gov/ncidod/sars/)
- Train staff who are the first point of contact to screen patients as soon as possible after arrival or over the telephone for SARS (see Attachment 1).
- Review and reinforce infection control practices and use of PPE.
- Prepare and implement an office policy of seeing or referring possible SARS patients when such
 patients call in BEFORE arriving at the office, and another policy to triage and manage possible
 SARS patients AFTER they have already arrived at the office.
- Have a box of surgical masks on the counter or near the entrance with a clear sign (see Attachment 2) for any patient to use if necessary.

Triage

- If possible, triage all patients when they call for an appointment. If SARS is a likely diagnosis, the patient should be instructed to go immediately to the nearest emergency department, bypassing the physician's office or outpatient clinic.
- To facilitate identification of patients who may have SARS, targeted screening questions concerning fever, respiratory symptoms, and recent travel should be performed as soon as possible after patient arrival (see Attachment 1).
- Workers at the front desk should put on an N-95 respirator¹ when exposed to a suspected case of SARS. If N-95 respirators¹ are not available, the healthcare worker should put on a surgical mask.
- Institute infection control measures immediately for any patient who has a history of exposure to SARS² and fever or respiratory symptoms. Consider referral to an emergency department if the

¹ N-95 respirators should be used in accordance with the CAL-OSHA regulations (www.dir.ca.gov/title8/5144.html or www.osha.gov/SLTC/etools/respiratory). This includes training and fit testing of each Health Care Worker (HCW), regardless of job classification, who may be exposed to a SARS patient to ensure a proper fit between the respirator's sealing surface and the wearer's face.

- respiratory symptoms are significant (e.g., moderate to severe cough, shortness of breath, dyspnea). Call ahead if you refer the patient to an emergency department. If the patient needs ambulance transport, notify the ambulance company in advance.
- Place a surgical mask on the patient as soon as possible. The mask should be worn at all times while in the office, examination room and (if applicable) during transportation to the emergency department. If the patient cannot tolerate a mask, instruct the patient to cover his/her mouth with a disposable tissue when coughing, talking or sneezing.
- Place the patient in the previously designated private room that will provide the maximum separation from others in the office.

Staff protection

- Minimize the number of staff entering the patient's room.
- Standard, contact, and airborne precautions are recommended. This involves use of eye protection, gowns, gloves and respiratory protection, preferably with use of an N-95 disposable respirator.
 Where respirators are not available, healthcare personnel evaluating and caring for a suspect SARS patient should wear a surgical mask.
- Healthcare workers should wear disposable, long sleeve gowns when direct face-to-face contact with a SARS infected person is anticipated.
- Disposable, non-sterile gloves should be worn when contact with respiratory secretions, blood and other body fluids are anticipated. Gloves are **not** a substitute for hand washing. Gloves should be put on immediately before patient contact and removed when physical contact with the patient is no longer necessary. Gloves should be changed between each patient.
- Hands should be washed with soap (plain or antimicrobial) and water after contact with all patients and environmental surfaces in close proximity to the patient. If hands are not visibly soiled with respiratory secretions, blood or other body fluids, an alcohol-based hand hygiene product can be use. For maximum effectiveness follow the instructions on the product label.
- Healthcare workers should be instructed not to touch the mucous membranes of the nose, eye or mouth with unwashed hands.
- Eye protectors (eye shields or goggles) should be worn when in direct face-to-face contact with a coughing patient.
- Avoid aerosol-generating procedures³ to the extent possible.

Evaluation

Evaluate the patient based on the symptoms and exposure history (see Attachment 3). If laboratory and chest X-ray studies cannot be performed with proper infection control procedures, consider referring the patient to an emergency department. Be sure to call ahead so that the emergency department (and ambulance) staff can take the appropriate precautions.

Reporting

Any patient meeting the exposure criteria² who has a fever and/or respiratory symptoms must be reported immediately to Orange County Public Health (Monday through Friday, 8:00 AM to 5:00 PM call

² Exposure to SARS is defined as: within the last 10 days, a history of 1) travel to an area with ongoing SARS transmission, OR 2) contact to a suspected or probable SARS case. See CDC case definition: http://www.cdc.gov/ncidod/sars/casedefinition.htm

³ High-risk aerosol-generating procedures include, but are not be limited to: Aerosolized medications treatments, diagnostic sputum induction, bronchoscopy, endotracheal intubation, airway suctioning, positive pressure ventilation by facemask, high frequency oscillatory ventilation (HFOV) (e.g., BiPAP, CPAP), close face-to-face contact during a coughing paroxysm, and cardiopulmonary resuscitation.

Epidemiology at 714-834-8180; after hours, weekends and holidays contact the Public Health Official On Call via Sheriff Communications at 714-628-7008).

Discharge instructions

For patients meeting the case criteria who are well enough to be sent home, discharge instructions must be obtained from Orange County Public Health (call 714-834-8180, after hours 714-628-7008), reviewed with the patient, and signed by the patient and a witness.

Any patient meeting the exposure criteria² who has a fever OR respiratory symptoms (i.e., does not meet the case definition but may be an evolving case) must be instructed to:

- Remain in isolation for the next 72 hours—remain at home; do not go to work, school, church, etc.; do not have visitors.
- If the symptom (fever OR respiratory symptoms) continues, collect at least 2 nasopharyngeal swabs in separate, sterile containers with viral transport medium, and serum for testing (see Attachment 3) or refer the patient for evaluation and specimen collection (call ahead before sending the employee elsewhere), extend isolation for another 72 hours, and notify Orange County Public Health.
- If the patient progresses to meet the case definition, report immediately to Orange County Public Health; the patient will have to remain in isolation until 10 days after resolution of fever and improvement in respiratory symptoms.
- If the symptom (fever OR respiratory symptoms) resolves, the patient does not need to remain isolated; however, the patient must continue twice daily monitoring of temperature until 10 days after last exposure.
- If medical care is needed, call ahead and advise the facility of the possibility of SARS.

Cleaning surfaces and patient care equipment

- Perform cleaning of the examination room after the patient leaves the examination room and before admitting another patient to that room.
- Depending on the ventilation system, wait an appropriate amount of time before entering the room (e.g., for a room with at least 6 air changes per hour, wait one hour). Alternatively, if windows can be opened, open the windows and wait at least a few hours.
- Wear a gown and gloves.
- Use an EPA-registered germicidal solution that provides low- or intermediate-level disinfection. Follow manufacturer's instructions for use (dilution, contact time, etc.).
- Areas that should be specifically targeted for cleaning include the examination table and horizontal surfaces that may have been touched by the patient or healthcare provider.
- Reusable examination equipment such as stethoscopes and blood pressure cuffs should be disinfected with a properly diluted, EPA-approved germicidal solution after use on a SARS patient.
- Disposable examination gowns and sheets should be placed in a plastic leakproof bag and disposed of as regular waste.
- Reusable examination gowns, sheets and lab coats should be placed in leakproof laundry bags and be laundered with warm water and any commercial detergent.
- Solutions used for cleaning and disinfection should be discarded after use.
- Thoroughly rinse and clean housekeeping equipment after use in a room or area where the SARS
 patient was, and allow the equipment to dry. Launder reusable mop heads and cleaning cloths
 according to current practice.

There is no need to routinely clean and disinfect walls, window drapes, and other vertical surfaces unless visibly soiled; disinfectant fogging for purposes of air disinfection is not recommended.

See www.cdc.gov/ncidod/hip/isolat/isolat.htm and www.cdc.gov/ncidod/hip/sterile/sterile.htm for additional information.

Monitor staff for SARS symptoms

Develop and maintain a listing of all personnel who had any contact with SARS patients or their environment of care.

High-risk exposure

- Staff who had a high-risk exposure, e.g., close contact during a coughing paroxysm, should immediately report the high-risk exposure event to the supervisor or other designated staff and be placed on administrative leave for 10 days. In addition, staff should:
- Be counseled about SARS symptoms, incubation period, transmission, treatment, and home isolation recommendations.
- Follow home isolation recommendations (obtain these from Orange County Public Health).
- Be required to take their temperature twice daily (AM and PM) and record the readings for 10 days after the last date of exposure.
- Be interviewed daily by telephone to assess for evolving symptoms.
- Be required to report any symptoms (e.g., fever, chills, cough, diarrhea, myalgias, etc.) to the supervisor or other designated staff.
- Call ahead and seek immediate medical evaluation if symptoms develop.
- Place a mask over their nose and mouth while in the presence of asymptomatic persons.
- Notify the physician's office prior to reporting for clinical evaluation.

If fever or respiratory symptoms do not develop while on the 10-day administrative leave, the HCW should be medically evaluated before cleared to return to work. If fever or respiratory symptoms develop, follow the instructions below ("<u>If symptoms develop in exposed staff</u>").

Non-high-risk exposure

- Instruct staff who may have had exposure to the patient or the patient's environment to be vigilant for fever and respiratory symptoms for 10 days following exposure. Staff should check their temperature and the presence of any respiratory symptom before reporting to work. In addition, these staff should:
 - Be counseled about SARS symptoms, incubation period, transmission, treatment, and home isolation recommendations.
 - Report to infection control, employee health or designee each day before beginning work for surveillance of symptoms (fever or cough) for 10 days after the last date of exposure.
 - Take and record their temperature one additional time daily for 10 days after the last exposure date.
 - Stay at home if fever or respiratory symptoms develop.
 - Report symptoms by telephone to the supervisor or designee immediately.
 - Leave assigned work area if symptoms begin while at work.
 - Place a mask over the nose and mouth if fever or cough develops.
 - Follow home isolation recommendations.
 - Notify physician or clinic prior to reporting for an appointment.

If symptoms develop in exposed staff

If fever or respiratory symptoms develop, the employee should not report to work but should call their supervisor or other designated staff. If symptom onset occurs at work, instruct the worker to immediately apply a surgical mask. The worker should call ahead before seeking a medical evaluation.

The same management outlined above under "Discharge Instructions" applies to a worker who develops fever or respiratory symptoms:

- Remain in isolation for the next 72 hours—remain at home; do not go to work; do not have visitors.
 - If the symptom (fever OR respiratory symptoms) continues, collect at least 2 nasopharyngeal swabs in separate, sterile containers with viral transport medium, and serum for testing (see Attachment 3) or refer the employee for evaluation and specimen collection (call ahead before sending the employee elsewhere), extend isolation for another 72 hours, and notify Orange County Public Health.
 - If the patient progresses to meet the case definition, report immediately to Orange County Public Health; the patient will have to remain in isolation until 10 days after resolution of fever and improvement in respiratory symptoms
 - If the symptom (fever OR respiratory symptoms) resolves, the patient does not need to remain isolated; however, the patient must continue twice daily monitoring of temperature until 10 days after last exposure
- If medical care is needed, call ahead and advice the facility of the possibility of SARS

Immediately report any symptomatic, exposed staff to Orange County Public Health (Monday through Friday, 8:00 AM to 5:00 PM call Epidemiology at 714-834-8180; after hours, weekends and holidays contact the Public Health Official On Call via Sheriff Communications at 714-628-7008).

1. Today's Date	$\frac{1}{m} \frac{1}{m} \frac{1}{d} \frac{1}{d} \frac{1}{y} \frac{1}{y} \frac{1}{y} \frac{1}{y} \frac{1}{y}$						
2. Reporter	Last Name:		First N	First Name:			
Hospital or Clinic (if applicable) Name:							
Phone: ()	Pager: ()	Other ()		? Phone ? Fax	Other ()	? Phone ? Fax	
3. Patient Information	Last Name:		First Na	me:			
City of residence:	State of residence & Zip code			Phone: ()			
4. Screening Criteria							
a. Temperature ≥100.5°F (>38°C): □Yes (measured by (circle): patient/health care worker) □No □Don't know							
Date of fever onset: $ \frac{m}{m} \frac{d}{d} \frac{d}{d} \frac{d}{y} \frac{d}{y$							
b. Respiratory complaints (e.g., cough, shortness of breath, dyspnea): ☐ Yes ☐ No ☐ Don't know							
c. Travel to area(s) affected by SARS in the 10 days before onset of illness:							
Geographic areas affected by SARS are subject to change. Please check the CDC's web site, http://www.cdc.gov/ncidod/sars/ , or call Orange County Public Health/Epidemiology and Assessment at (714) 834-8180 for the latest information.							
If Yes, date of last departure from SARS-affected area:							
d. Close contact of a known suspect SARS case:							
☐Yes ☐No ☐Don't know Close contact is defined as having cared for, having lived with, or having direct contact with respiratory secretions and/or body fluids of a patient known to be a suspected SARS case according to the Updated Interim SARS Case Definition.							
If Yes, in which category does this patient fit:							
□ household contact □ health care worker contact							
□ other, specify:							
5. If 4a, 4b, and 4c or 4d are "Yes," the patient meets the criteria for SARS. Please call Orange County Public Health/Epidemiology & Assessment at (714) 834-8180 to report the case and to arrange for laboratory testing for SARS. Health care providers of patients whose illness is consistent with the case definition for SARS should continue diagnostic evaluation for other causes of respiratory illness, and when appropriate, empiric therapy that includes activity against organisms associated with community-acquired pneumonia of uncertain etiology, including both typical and atypical respiratory pathogens. Immediately implement appropriate infection control measures if not already done. The following laboratory tests are recommended by CDC for possible SARS patients (along with any other diagnostic tests appropriate to the patient's presentation) and are to be done by the health care provider: sputum gram stain and culture (bacterial-including Legionella, and viral), blood culture, rapid influenza and RSV tests, Legionella urine antigen, tests for chlamydia and mycoplasma, chest X-ray, and WBC with differential and platelet count. (6/12/2003 Adapted from CDC's SARS Screening Form, Version 3-29-03)							

Attachment 2

Sign for Patient Triage

Post a sign outside the clinic or office entrance informing patients of the need to take special precautions. As an example:

These precautions could be specific to those with a history of travel to an area of SARS transmission (see Case Definition), or to all those with a fever and new respiratory symptoms, which could limit the transmission of other respiratory pathogens in these settings.

To all patients:

To prevent the transmission of Severe Acute Respiratory Syndrome (SARS) to healthcare workers and other patients, please follow these instructions:

If you have a fever and a new cough and/or difficulty breathing

PLEASE

- 1. Place a surgical mask, located (location of mask instructions) over your nose and mouth before entering this health care facility.
- 2. Inform the assistant at the front desk of your symptoms.

THANK YOU FOR PROTECTING OTHER PATIENTS AND HEALTHCARE WORKERS



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Attachment 3

Please note that the following laboratory tests are recommended by CDC for possible SARS patients (along with any other diagnostic tests appropriate to the patient's presentation). These tests are to be done by the hospital/clinic/office clinically evaluating the patient.

- Sputum gram stain and culture (bacterial—including for *Legionella*, and viral)
- Blood culture
- Rapid influenza and RSV tests
- Legionella urine antigen
- Tests for Chlamydia and Mycoplasma
- Chest X-ray
- WBC with differential (including absolute neutrophil and lymphocyte counts); platelet count

Other tests that may be useful:

Liver enzymes: lactate dehydrogenase (LDH), alanine aminotransferase (ALT), aspartate aminotransferase (AST)

Additional specimens for possible testing by Public Health* (including the Calif Dept of Health Services or CDC):

- Respiratory: Two (2) nasopharyngeal NP swabs collected within 7 days after the onset of fever. Use only sterile dacron or rayon swabs with plastic shafts. Do NOT use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit PCR testing. Place swabs immediately into separate sterile vials containing 2 ml of viral transport media. Break the applicator sticks off near the top of the container to permit tightening of the cap.
- Serum: Acute serum (at least 3cc, collected within 7 days of onset); ship on wet ice
- Stool: If possible, (10 50 cc) in stool cup or urine container with secure cap and sealed with parafilm; ship on wet ice. If stool specimen cannot be obtained, submit rectal swab in viral transport medium.
- <u>Urine</u>: If possible, (10 50 cc) should be placed in a urine container, capped securely, sealed with parafilm and bagged.

*Any potential case of SARS must be reported to Orange County Public Health before specimens will be accepted. Monday through Friday, 8:00 AM to 5:00 PM call Epidemiology at 714-834-8180; after hours, weekends and holidays contact the Public Health Official On Call via Sheriff Communications at 714-628-7008.